FIG. 1A

FIG. 1B

SHELL MAPPING WITH HEXA-GRID CONSTELLATION

FIG. 2

FIG. 3

OCTAL LABELS O^1O^0
(= BINARY LABELS $X^3X^2X^1X^0$)

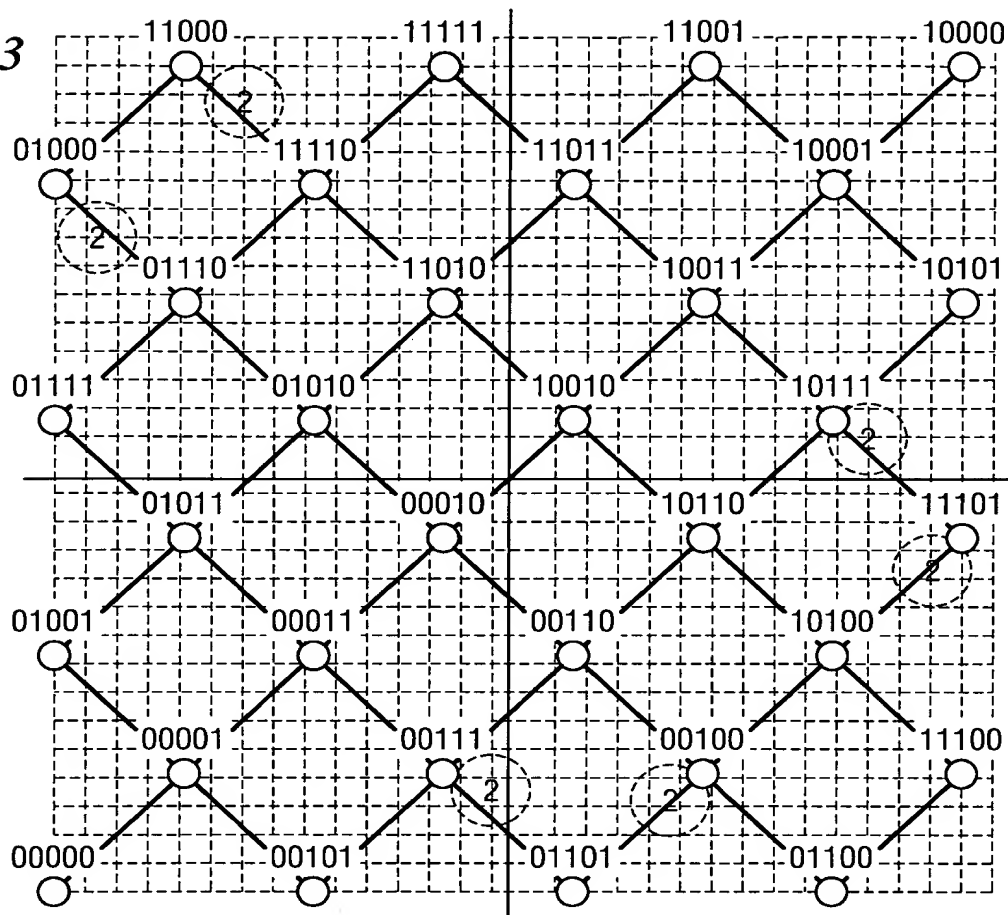**FIG. 4A**

SUBSET B0

SUBSET B1

FIG. 4B

SUBSET B0

SUBSET B1

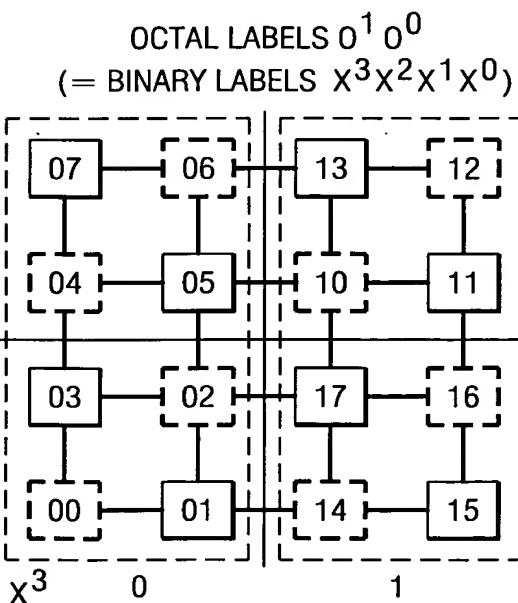OCTAL LABELS $0^1 0^0$
(= BINARY LABELS $x^4 x^3 x^2 x^1 x^0$)
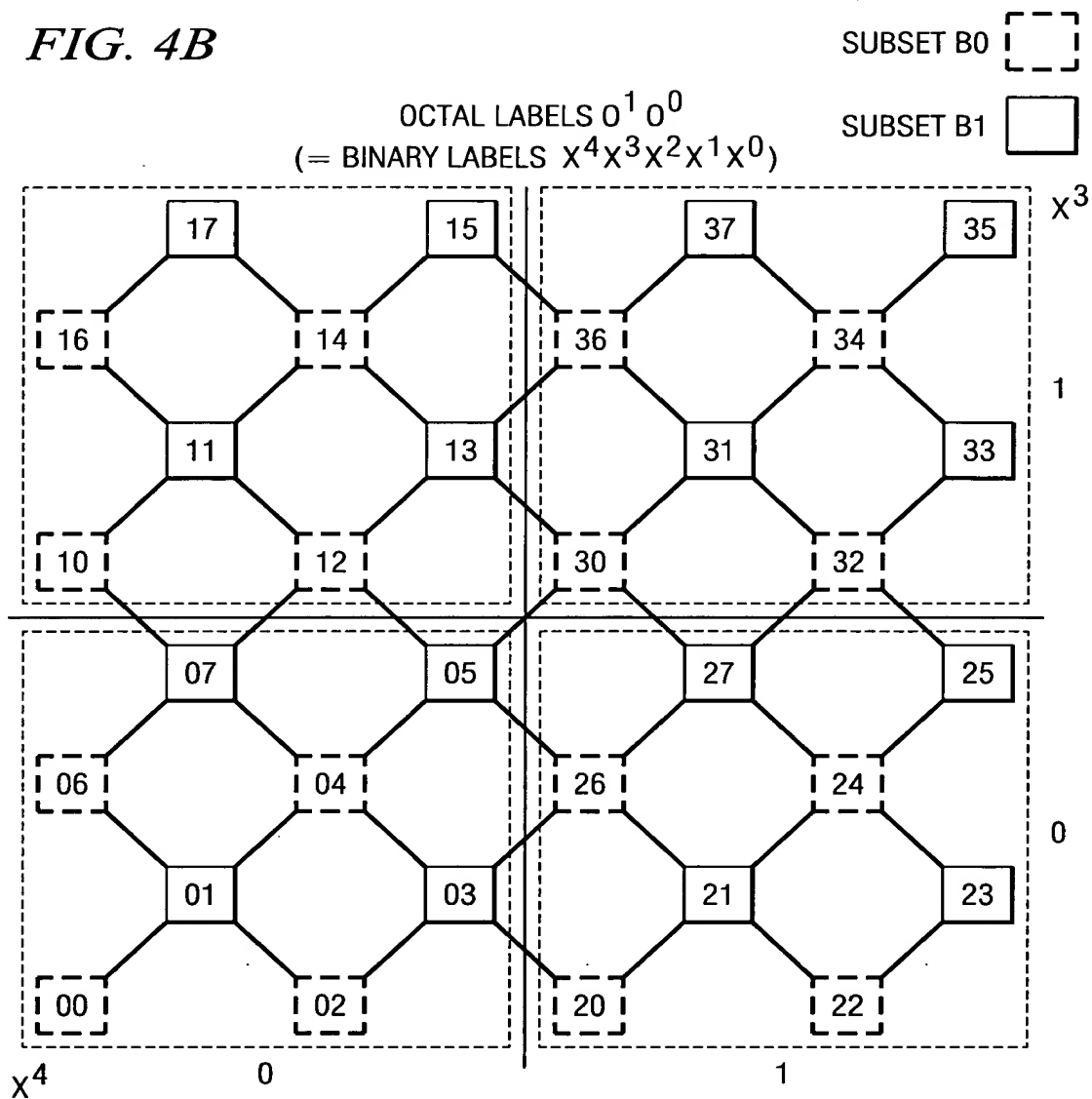
FIG. 4C

SUBSET B0

SUBSET B1

64QAM: OCTAL LABELS $0^1 0^0$
(= BINARY LABELS $x^5 x^4 x^3 x^2 x^1 x^0$)

x^3

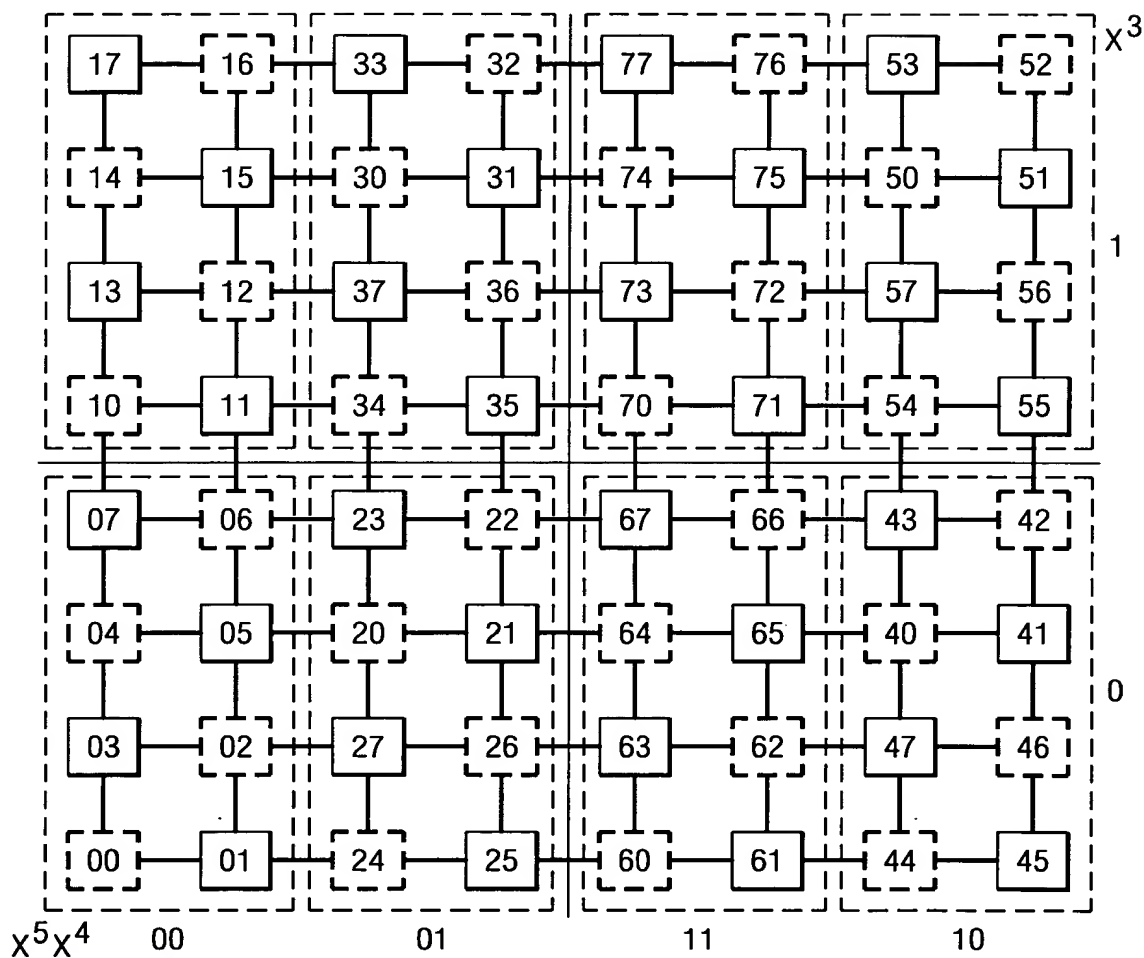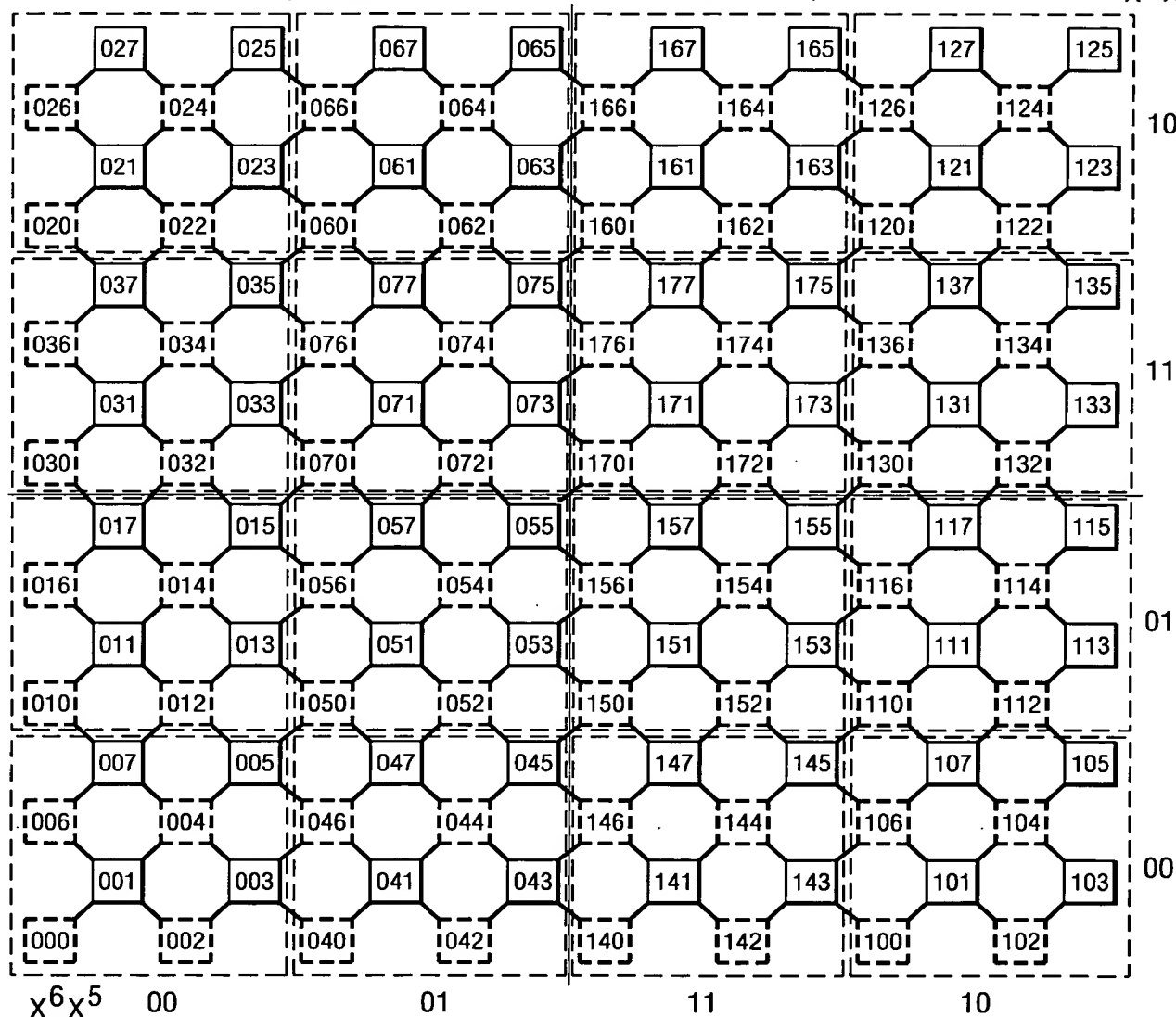| 17 | 16 | 33 | 32 | 77 | 76 | 53 | 52 |
14	15	30	31	74	75	50	51
13	12	37	36	73	72	57	56
10	11	34	35	70	71	54	55
07	06	23	22	67	66	43	42
04	05	20	21	64	65	40	41
03	02	27	26	63	62	47	46
00	01	24	25	60	61	44	45

$x^5 x^4$ 00   01   11   10

FIG. 4D

128QAM: OCTAL LABELS $0^2 0^1 0^0$
(= BINARY LABELS $x^6 x^5 x^4 x^3 x^2 x^1 x^0$)

SUBSET B0   SUBSET B1